

REMARKS

Claims 1-21 and 23-26 are pending in this application. Claim 22 is canceled and claim 26 is added herein. Claims 1-6, 9, 10, 13, 17, and 23 have been amended herein. In view of these amendments and remarks, Applicant respectfully requests reconsideration of the claims.

Applicant hereby confirms the election of claims 1-21 and 23-25 in Group I.

Claims 6 and 17 were rejected under 35 U.S.C. 112, second paragraph for being indefinite. More specifically, the Examiner considers the claims indefinite for including variable deposition process as one of the recited "etching" processes.

Applicant's attorney was at first inclined to agree with the Examiner regarding the 35 U.S.C. 112 rejection before he had completed his review of the Applicant's specification. However, as his own lexicographer, the author of the specification has very clearly explained that for purpose of the instant specification, various processes including chemical-vapor-deposition, sputter deposition, thermal deposition, evaporation, and physical vapor transport as well as other conventional, or other thin film processes to be developed in the film as to be considered etching. See page 7, paragraph 0017. The last sentence of the same paragraph also states that "such treatment is not intended to limit any aspect of the present disclosure to employing the etching process to remove material rather than to add material." Paragraph 0031 states that "although the description of methods described in the specification discuss etching [or removing material], --- the methods may also be readily adapted to monitor thickness during the formation of material."

Consequently, it is believed that the specification adequately supports use of the terms in claims 6 and 17 and that the 35 U.S.C. 112 rejection is improper. If the Examiner remains unconvinced, the term etching could be replaced by the phrase "a process that changes the thickness" of a layer as set forth in new claim 26. However, the phrase is somewhat awkward when used in the claims.

The remainder of the claims now in the specification were rejected under 35 U.S.C. 103(a) as obvious over U.S. Patent 6,712,927 to Grimbergen, *et al.* More specifically, the Examiner alleges that the Grimbergen reference discloses an etching process of a multilayer substrate wherein a monitoring system monitors and determine[s] the progress being performed based on optical characteristic such as optical emissions of individual layers to be etched relative to the underlay by interferometry. The Examiner also alleges that Grimbergen, *et al.* teaches multilayers being etched sequentially based on their etch rates and that optical emissions are measured for the layers by interferometry.

On the other hand, the Examiner admits that Grimbergen, *et al.* does not teach "determining dynamic etch (deposition) progressions each based on the plurality of optical characteristics associated with the plurality of layer," or the determination of a plurality of reflective indices each associated with the plurality of layer to be etched.

Although Grimbergen, *et al.* mentions sequential etching of layers, Applicant respectfully disagrees that because Grimbergen, *et al.* discloses sequentially etching multiple layers and that Grimbergen, *et al.*'s etching gas can be changed during an etch, the method of the present invention is obviously. In no way does Grimbergen, *et al.* even suggest, much less teach the method disclosed in the specification and required by the

claims. For example, Grimbergen, *et al.* apparently follows the prior art, as discussed in the specification at paragraph 0006, of assuming that a layer being processed has substantially uniform [optical] characteristics. However each of the present independent claims includes a requirement that the actual value of the selected optical characteristics of the layer being processed be continuously determined, and that this determined value be used in calculating the "etch" progression or rate. This progression or rate in turn is used to calculate the target etch depth for each layer.

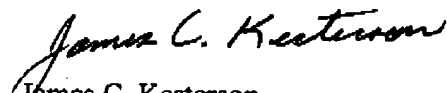
The Grimbergen, *et al.* reference may teach using monitored values of an optical characteristic to alert an operator (or machine) that one layer has been etched through and etching is starting on a second layer, but does not teach dynamic real time control of the etch procession or etch rate.

It is further noted that the claims and especially claim 1 has been extensively amended, such that the claim now clearly include elements no where even suggested, much less taught by Grimbergen, *et al.*

Therefore, it is respectfully submitted that the claims no in this case are in condition for allowance.

In view of the above, Applicant respectfully submits that the application is in condition for allowance and requests that the Examiner pass the case to issuance. If the Examiner should have any questions, Applicant requests that the Examiner contact Applicant's attorney at 972-732-1001 so that such issues may be resolved as expeditiously as possible. No fee is believed due in connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge the appropriate fees to Deposit Account No. 50-1065.

Respectfully submitted,


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